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2598

THE OAK LOOPER (Therina somniaria Hulst.)

The oak looper is a native forest insect belonging to the family Geometridae, which shows a very decided preference for Garry Oak (Quercus garryana) but when abundant feeds on nearly any plant that happens to be at hand. It is called a looper or measuring worm on account of the way in which the caterpillars crawl.

There is considerable question at present as to its identity. It has been confused by the specialists with the hemlock looper, which in the past has caused such tremendous havoc in the fir and hemlock stands of the Coast Counties. And as yet it is not separated from the very closely allied eastern forms. We may have only one species covering the entire country or distinct eastern and western species or varieties or different biological races, one feeding on hemlock and the other on oak. We do know however that the Garry Oak Looper, as it might be called, is distributed through western Oregon and north into British Columbia. Through this region it feeds primarily on Garry Oak, although slopping over on to any other trees or shrubs that happen to be handy. And on the other hand we have the hemlock looper which shows a decided preference for hemlock and Douglas fir, although it will also feed on other trees when forced to do so. The evidence is that these two are different insects, at least separable in the field by their food habits.

The present outbreak is spread over a rather large area in Polk County extending from Amity to Monmouth and from the ridge west of Salem to the foothills back of Willamina. Within this belley, large areas of farm woodlots have been completely defoliated, whole hillsides have turned brown from the dead foliage and all of the Garry oaks are more or less affected. Besides oak the loopers were found feeding on maple, ash, willow, prune, apricot, walnut, Douglas fir, white fir, rose, poison oak and numerous other shrubs. This epidemic was first noticed last year (1929), but is more widespread and causing more complete defoliation this year. Farmers report having seen them before in years past but never in such quantities.

The female moths, which are a light brown in color, deposit their eggs in the crevices of the bark, in the fall of the year. These eggs overwinter and hatch into tiny caterpillars in early spring. These migrate to the new foliage and start feeding. The full grown caterpillars are of the "measuring worm" type, nearly hairless and of a pale blue or greenish color splotched with brown markings. Feeding is complete by the last of August, when the caterpillars become sluggish and transform into pupae or the resting stage. Pupae are formed without the protection of cocoons and may be found in the moss, in crevices of the bark and under leaves on the ground. Emergence of the adults moths occurs in September and the life cycle is repeated.

Since the Garry oak is a deciduous tree, it seems to be able to withstand repeated defoliations without permanent injury. It is thought that very few of the defoliated trees will die and even now many are putting out new leaves. The only economic importance that was discovered in connection with the epidemic was that one farmer said he was going to give up his farm and leave the country because he couldn't step out of his house without caterpillars dropping down his neck.

Control

The caterpillars could be killed with arsenical dusts or sprays but except for Park trees the expense would hardly be justified, since no permanent damage results. Airplane dusting could be very easily done in this region for approximately $6.00 per acre, and in Parks such an expense might very easily be justified.

Parasites and predators are now busily working on the loopers and it is predicted that next year will see the end of the present outbreak.

F. P. Keen,
Entomologist.

Portland, Ore.
Sept. 1, 1930.

123°30′ 20′ 10′

R.8 W. R.7 W. R.6 W. R.5 W. R.4 W. R.3 W. R.2 W.

FOREST

T.6 S.

45° 00′

T.7 S.

T.8 S.

T.9 S.

T.10 S.

POLK COUNTY OREGON

☐ Oak woodlots. Infested with Oak looper 1930 (July)